

Chapter 5



Acquiring
the preserves was the easy part,
developing community support, approving the
bonds, and buying the land is simple and fun.
Your challenge will be to manage all of the
conflicting demands for use of the land—
this may not even be possible.

Charles Christiansen to incoming
Parks, Recreation and Library Director
James Colley in 1979

Design Guidelines, Operations, and Management

A. Philosophy

The management philosophy for the Sonoran Preserve is to meet the recreational and open space needs of residents while ensuring that the natural and cultural resources are protected and maintained. Conflicts between resource management and public use are recognized, but can be minimized with sound management practices. The Preserve System provides an opportunity to promote an environmental ethic as part of the recreational visitor experience (Figure 5.1).



Figure 5.1 Promote environmental ethics through recreational experience

To implement this philosophy, the city and community should develop a partnership to address required resources, regulations, volunteers, and adjacent development. Special tasks include:

- Provide the necessary financial and physical resources to plan, develop, staff, equip, manage, and acquire preserve lands. To adequately meet the needs of preserve users and protect this valuable resource, operations funding must be linked to acquisition funding. Figures 5.2 and 5.3 illustrate the immediate need for protection of these resources.
- Enforce rules, regulations, and city ordinances which provide for the security and protection of natural and cultural resources, visitors, and facilities. Rules and operational procedures shall be consistent with those of the Mountain Preserve.
- Expand existing programs that actively enlist the support and commitment of volunteers and educate citizens of all ages on the Preserve System, its proper use, and the value it provides to our society and the environment.

- Ensure that development adjoining the preserve is designed to complement the objectives of the preserve.

B. Plan Implementation and Development

The Planning Department has projected that the NSA may take more than 40 years to develop. To acquire the entire Sonoran Preserve and fully develop facilities could take even longer. To maintain the quality and consistency expected in such an ambitious open space preservation effort, design standards are needed. Consistency and quality of facilities within and adjacent to the preserve should be maintained.

Design Standards and Guidelines

Design guidelines are necessary to establish standards for the preserve where planning and development is in harmony with the surrounding natural environment. In addition, these guidelines should promote water and energy conservation. For example, the use of indigenous plant material should be required. The general intent of design guidelines developed for the Sonoran Preserve should be compatible with the goals identified in the *Sonoran Preserve Preliminary Plan*. The design and construction of facilities within the preserve offer opportunities to reinforce as well as demonstrate the dedication to preservation. The South Mountain Environmental Education Center illustrates an architectural solution that is sensitive to our desert environment (Figure 5.4). Proper orientation, responsible material selection, and sensitivity to the desert's aesthetics will all be considered. The following are currently under development by the PRLD:

- Guidelines for access areas that include major activity areas, secondary access areas, and local or neighborhood access trailheads



Figure 5.4 South Mountain Environmental Education Center

This should be our challenge in the future: Can we learn to be good stewards as opposed to merely owners and consumers of the environment? To live creatively, rather than destructively—this is the choice of each individual as well as society as a whole.

We must choose wisely.

Calvin Straub 1983



Figure 5.2 Illegal dumping



Figure 5.3 Trailblazing

The guidance and support of many boards, committees, foundations, and individuals has played a significant role in the success of open space preservation in Phoenix.

- Guidelines for structures in the preserve to include interpretive centers, public restrooms, ranger stations, ramadas, trash enclosures, and accessory buildings
 - Guidelines for site features and amenities to include walls and fences, site furniture, lighting, signage, wildlife observation areas, and preserve boundary delineation
 - Guidelines for recreation facilities to include sand volleyball courts, horseshoe pits, and playgrounds
 - Guidelines for circulation and parking to include multi-use trails, underpasses and/or overpasses, roadside barriers, parking lots, horse staging areas, transit facilities, roadways, bridges, and culvert crossings
 - Guidelines for trail planning, design, and management
- These guidelines will be used by staff, volunteers, and consultants in performing any construction or development project within the preserve.

Adjacent Development Compatibility

The PRLD will promote compatible development and design adjacent to the Sonoran Preserve. This will be accomplished by clearly communicating the preserve's plan and goals, encouraging site and development standards that are compatible with the Sonoran Preserve, and securing public access to the preserve as early in the planning process as possible. This will be accomplished by the following:

- Maintaining good communications with other city departments and county, state, and federal agencies
- Developing sensitive design guidelines for adjacent development
- Reviewing all adjacent development plans as submitted to the Development Services Department to ensure compatibility with preserve goals and plans
- Developing positive working relationships with property owners adjacent to the preserve
- Monitoring development activities on adjacent or nearby properties to identify development objectives and to seek development compatible with the preserve's goals

C. Citizen Involvement

Many boards, committees, foundations, and individuals provide guidance and support for the PRLD. These efforts have historically played a significant role in the success of open space preservation in Phoenix and they are and will continue to be key to the success of the Sonoran Preserve (Figure 5.5). The recommended governance hierarchy follows.

1. Parks and Recreation Board

The Parks and Recreation Board is appointed by the mayor and City Council and has charter authority.

2. Phoenix Sonoran Preserve Committee

The Parks and Recreation Board appointed the Phoenix Sonoran Preserve Committee to serve as an advisory group to work with staff and advise the board on issues concerning the mountain parks and Sonoran Preserve.



Figure 5.5 Citizen involvement in the preserve

3. Ad Hoc Technical Advisory Group

An ad hoc technical advisory group should be developed to provide assistance regarding natural resource issues to the Phoenix Sonoran Preserve Committee and staff responsible for implementing and managing the preserve. The ad hoc group would be composed of professionals from Arizona Game and Fish Department, Arizona State University, and federal land management agencies, as well as PRLD staff—recreation professionals, landscape architects, open space managers, archaeologists.

4. Volunteer Programs

Volunteers are crucial to the City of Phoenix in managing and operating the preserve system. Volunteers will assist staff in providing education programs, developing and maintaining trails, and acting as advocates of the Sonoran Preserve system. Programs currently in place in the Phoenix Mountain Preserve system that should be implemented in the Sonoran Preserve include the Desert Awareness Program, Preserve Watch, and Ranger Cadets. When appropriate, additional opportunities and programs should be considered.

D. Natural and Cultural Resource Protection

To effectively manage natural and cultural resources, park managers must be knowledgeable about those resources and any changes in their condition. The *Cave Creek Wash Preservation Boundary Study* identifies natural elements within the Cave Creek Wash corridor that need to be monitored through the management process (Ewan et al. 1996). Park rangers will be trained to carry out monitoring activities as

part of their patrol and maintenance activities (Figure 5.6). Trail access, facilities, and circulation components of the master plan should be designed to protect resources through control of access and visitor use. The plan recommends areas which will have access limited to designated trails. These restricted areas will enhance wildlife and revegetation efforts by limiting human impact.



Figure 5.6 Management of cultural resources

Revegetation/Restoration

A revegetation/restoration plan will be developed and implemented as time and resources permit. Indigenous Sonoran Desert plant species, as well as plants that may have been historically present, would be used in all revegetation/restoration projects.

Wildlife

A study of wildlife species using the area will complement the revegetation efforts as well as provide baseline information for ongoing monitoring of wildlife presence and diversity. Wildlife management will emphasize the protection and maintenance of vegetation communities and the diversity of animal habitats. Restricted access areas may be established to further promote the health of wildlife.

Cultural Resources

Prehistoric and historic elements in the area should be identified and categorized for restoration, preservation, or documentation and removal. Impact to prehistoric and historic features can be managed through control of access points and visitor activity. Designated trails, signs, and interpretive efforts are examples of ways to protect and enhance the heritage of a site.

Fire Prevention

Fire is a natural, although infrequent, component of the desert ecosystem. The frequency of fires in the Sonoran

Desert has increased. This is due to several factors that include the proximity to urban and developed areas and increased fuel loads due to the presence of exotic plant species. All of this creates the need to extinguish human-caused fires quickly (Bureau of Indian Affairs et al. no date).

Any fires associated with picnic use are to be restricted to cooking grates in the activity areas only. All fuels must be brought in from outside the preserve to prevent the destruction of native vegetation for firewood. Smoking will be limited to parking lots and activity areas. As in the Phoenix Mountain Preserve, the PRLD director can prohibit fires or smoking during periods of high fire danger.

E. Visitor Experience and Safety

The mission of the PRLD is to provide and maintain a diversity of safe, available, and accessible recreational opportunities (Figure 5.7).



Figure 5.7 Recreation opportunities for all residents

Visitor Experience

Through facility design and the use of signs, the first point of contact will provide visitors with information on the use and interpretation of the desert and the preserve system. Active recreational uses will be oriented toward major and secondary activity areas. They are located in areas with the greatest human disturbance, pre-existing facilities, and acceptable access to streets or other transportation corridors.

In support of the Sonoran Preserve concept, the development at these activity areas will include family and group picnic facilities, trailheads, restrooms, ranger stations, and interpretive facilities. Active recreation facilities are limited to playgrounds, horseshoes, and/or sand volleyball. The identified forms of active recreation will only occur if similar facilities are not available at neighborhood or community parks within an acceptable radius of the activity hub. Each activity may not be located in each activity area.



Figure 5.9 Mountain biking



Figure 5.10 Hiking



Figure 5.11 Riding

Since 1988 the PRLD has addressed the fact that hiking and walking are two of the most popular outdoor recreational activities in Arizona (PRLD 1988) (Figure 5.8). The Sonoran Preserve will provide multi-use trails for physical fitness, communing with nature, and social interaction (Figures 5.9, 5.10, 5.11). Establishing and securing boundaries through natural and mechanical means will be the first priority for managing the desert preserve access areas and trail corridors.



Figure 5.8 Hiking in the mountain preserve

Visitor Safety

The park visitor must have a safe park where facilities are in good repair and not destroyed by vandalism. Control of unauthorized activities within the park allows nearby residents to view the park as a positive neighbor and not a threat. A combination of rules and regulations, signs, interpretive efforts, volunteer efforts (Preserve Watch, Ranger Cadets), patrols, and visitor contacts by park rangers will provide a safe, quality outdoor experience (Figure 5.12).



Figure 5.12 New signage standards for preserve system adopted by PRLD in 1996

Definite hours of operation will be established and enforced for visitor safety as well as security. Other activity hubs may have hours that reflect policies in mountain preserve use areas. Park rangers will patrol the desert preserve from

horseback or mountain bike, on foot, and by marked vehicle. Visitor education will be the primary focus of any regulatory contact. Regulatory signs and ranger patrols should be obvious, but not complicate or compromise the desert preserve experience.

F. Required Resources

Areas with a high level of use will require a higher level of maintenance than passive natural areas. Maintenance standards applied to one type of area will not necessarily be applied to another.

It will be necessary to provide staff for security, maintenance, and interpretive duties at the activity hubs, on the trail system, and throughout the area for protection and promotion of the resource. Park rangers can perform all these duties, though it may be more cost effective to assign certain responsibilities, such as picnic site maintenance, to groundskeeper positions.

Adequate positions and related equipment (such as patrol and maintenance vehicles, radios, and uniforms) must be budgeted for a minimum of two shifts per day. Other equipment and supply needs can be shared with existing units in the mountain preserve system.

Adequately trained staff, with experience in open space design, planning, and landscape ecology, should be provided. Air photos of South Mountain Park taken in 1970 and 1990 illustrate the significant change that can take place in a short period of time (Figures 5.13, 5.14). Ongoing monitoring of the ecological health of the Sonoran Preserve and the existing desert parks and mountain preserves should be provided to ensure the long-term protection and management of the entire system.

As interpretive demands increase or permanent facilities are built, specialized staff to provide interpretive programming and to operate educational centers will be needed, as well as resources to support the operating component of these services.



Figure 5.13 Eastern edge of South Mountain Park, 1970



Figure 5.14 Eastern edge of South Mountain Park, 1990

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